

**Abstract**

5 Methods for the plasma-based generation of X-radiation are described with the steps: provision of a target material (50) in the form of a free flow structural formation (51) in a vacuum chamber (20), and irradiation of the target material (50) in order to produce a plasma condition in which the X-  
10 radiation is radiated therefrom, the flow structural formation (51) being formed in such a way that the target material has, at least at the location of the irradiation, a surface (52) with a local curvature minimum. Devices for the implementation of the methods and, in particular, X-ray sources  
15 for the plasma-based generation of X-radiation are also described.

(Fig. 1)